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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,083	12/28/2000	Vinay K. Awasthi	10559/373001/P10179	3506

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FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER	
KANG, PAUL H	

ART UNIT	PAPER NUMBER
2141	6

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/753,083	AWASTHI	
	Examiner	Art Unit	
	Paul H Kang	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 7, 17, 23 and 29 are objected to because of the following informalities: "then" in line 3 should be "than." Appropriate correction is requested.

Drawings

2. The drawings are objected to because Figures 2 and 5 are mislabeled: step 170 should read "Receive data packets from device" and step 180 should read "Transfer Data Packets to Program." Figure 2, element 32 should be labeled as "NIC". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any

required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 11, line 2, after "control to," it should read either "the application program" or "the device driver". If the latter is correct, since this embodiment pertains to the input process (figure 5), "the application program" found on line 12 should also be changed to read "the device driver".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5, 15, 21 and 27 and claims 7, 17, 23 and 29 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Method steps critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The method steps recited in claims 5, 15, 21 and 27, if read as claimed, would be performed in response to the comparison of the calculated arrival rate to the arrival rate threshold in step 72 (Figure 4, or alternatively step 172 in Figure 5). That is, if at step 72

the arrival rate is less than the threshold, the data is stored in the queue. Specification, p. 6, line 18 – p. 9, line 17.

However, this is not the invention as enabled by the disclosure. In the disclosure, the step of storing data in the queue is performed in response to the second comparison performed in step 76, which in turn is dependent on the result of the comparison performed in step 74 (step comparing data in the queue to the queue threshold), which in turn is dependent on the result of the comparison performed in step 72 (the first comparison performed comparing the arrival rate to the threshold rate).

Likewise, the method steps recited in claims 7, 17, 23 and 29 omit the essential steps similar to those described above.

If the applicant believes the disclosure enables the steps as claimed, applicant is requested to cite those portions of the specification which enables such method steps, and additionally, submit a related figure showing said method steps.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al., US Pat. No. 6,650,640 B1, in view of Videcrantz et al., US Pat. No. 6,275,588 B1.

6. As to claims 1, 11, 19 and 25, Muller teaches the invention substantially as claimed. Muller teaches a method, an article comprising computer-readable medium that stores computer-executable instructions, a data packet processing device, and a computer network system of processing data packets comprising:

a source of data packets; a destination of data packets; an input device for receiving data packets from the network; and an output device for transmitting data packets to the network (Muller, col. 4, line s 8-67);

initiating transmission of data packets in the queue based on the number of data packets in the queue (Muller, col. 98, line 12-63).

However, Muller does not explicitly teach determining an actual arrival rate of data packets and a number of data packets stored in a queue and initiating transmission of data packets in the queue based on the actual arrival rate in addition to the number of data packets in the queue.

In the same field of endeavor, Videcrantz teaches a system and method for controlling data transmission over a LAN wherein the actual arrival rate as well as the number of data packets in the queue are used to control data transmission (Videcrantz, col. 21, line 10-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the use of actual arrival rate in the control of data transmission as taught by Videcrantz, into the system of Muller, for the purpose of reducing data transmission time and processor load.

7. As to claims 2, 3, 12 and 13, Muller-Videcrantz teach a method of receiving the data packets from a program; and transmitting the data packets to a device; and receiving the data packets from a device; and transmitting the data packets to a program (Muller, Muller, col. 4, lines 8-67).

8. As to claims 4, 14, 20 and 26, Muller-Videcrantz teach transmitting the data packets in the queue includes transmitting at least one burst of data packets, wherein each burst contains a number of data packets sufficient to maximize throughput (Muller, col. 98, lines 12-40; Videcrantz, col. 21, line 10-55).

9. As to claims 5, 15, 21 and 27, Muller-Videcrantz teach including storing a data packet in the queue if the actual arrival rate is less than the first threshold value, and scheduling a future interrupt event to cause processing of data packets from the queue (Videcrantz, col. 21, line 10-55; Muller, col. 98, lines 51-63).

10. As to claims 6, 8, 16, 22 and 28, Muller-Videcrantz teach comparing the actual arrival rate of data packets to a first threshold; wherein the actual arrival rate is based on a weighted average of time intervals between a predetermined number of previous data packets; and the first threshold value corresponds to a predetermined arrival rate (Videcrantz, col. 21, line 10-55; col. 22, lines 3-65; Muller, col. 98, lines 12-40).

11. As to claims 7, 17, 23 and 29, Muller-Videcrantz teach transmitting a data packet without storing the data packet in the queue, if the actual arrival rate is greater than the

first threshold value (Videcrantz, col. 21, line 10-55).

12. As to claims 9, 10, 18, 24 and 30, Muller-Videcrantz teach comparing the number of data packets to a second threshold, wherein the second threshold represents a number of unprocessed data packets (Videcrantz, col. 21, line 10-55; Muller, col. 98, lines 12-40).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul H Kang whose telephone number is (703) 308-6123. After October 26, 2004, all calls should be placed to (571) 272-3882. The examiner can normally be reached on 9 hour flex. First Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PAUL H. KANG
PRIMARY PATENT EXAMINER